



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| | | | | |
|--|-------------|----------------------|----------------------|------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 09/601,103 | 07/27/2000 | REIJI TAMURA | 152-531P | 5600 |
| 2292 | 7590 | 05/19/2004 | EXAMINER | |
| BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | FERGUSON, LAWRENCE D | |
| | | ART UNIT | PAPER NUMBER | |
| | | 1774 | | |

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/601,103 | TAMURA ET AL. | |
| | Examiner | Art Unit | |
| | Lawrence D Ferguson | 1774 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10 February 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,5-8 and 10-23 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,5-8 and 10-23 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 2/27/04.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____

DETAILED ACTION

Response to Reconsideration

1. This action is in response to the request for reconsideration mailed February 10, 2004. Claims 21-23 are added rendering claims 1, 5-8 and 10-23 are pending.

Claim Rejections – 35 USC § 103(a)

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5-8, 10-13, 15 and 17-23 are rejected under 35 U.S.C. 103(a) as being obvious over Yamada et al. (U.S. 6,127,016) in view of Miyamoto et al (U.S. 6,132,932).

Yamada discloses an information recording medium having minimum jitter (column 2, lines 25-40) comprising a substrate, a first protective layer, recording layer, second protective layer and reflective layer (column 3, lines 33-38) where the recording and protective layers are analogous to recording and protective films. Yamada discloses the recording layer comprises nitrogen, which constitutes the boundaries of the interfaces between the recording layer and first and second protective layers (column 5, lines 47-50). The reference discloses the recording layer comprises Ge, which can form

a compound in combination with Ag, Te and Sb (column 10, lines 40-47) where the first and second protective layers comprise sulfides and ZnS-SiO₂ (column 11, lines 16-21 and column 12, lines 4-14). Yamada further discloses the reflective layer includes metals such as Al with additional material such as Cr or Ti (column 11, lines 47-50). The thickness of the recording layer is in the range of 80 to 5,000 Angstroms (8 to 500nm) and the thickness of the first protective layer is in the range of 50 to 500nm and the thickness of the second protective layer is in the range of 5 to 300nm, which meets the limitations of instant claims 17-20. The reference discloses the recording material is composed of Ag (column 2, lines 39-43) at an amount of 4 to 7 at.-% (Table 2) and the nitrogen content is at 0 to 15mol at.%. In claim 1, the phrase "the recording film undergoing change in atomic arrangement upon irradiation with recording beams" constitutes a 'capable of' limitation and that such a recitation that an element is 'capable of' performing a function is not a positive limitation but only requires the ability to so perform. In newly added claim 21, the phrase "wherein if data is written on the medium, and the medium is stored for 500 hours in an environment of 80 C and 90% RH, and the medium is directly overwritten with a random signal, then the jitter does not increase" introduces a process limitation to the product claim. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966. Further, process limitations are given no patentable weight in product claims. Furthermore, the claim language "...if data is written" and "...then the

jitter does not increase" constitutes a 'capable of" limitation and that such a recitation that an element is 'capable of' performing a function is not a positive limitation but only requires the ability to so perform. Although Yamada does not explicitly teach the jitter not exceeding 8.5 or 15% as in instant claims 1 and 22, Miyamoto teaches an information recording medium (column 1, lines 54-55) having a recording layer (column 2, line 16) and first and second protective layers made of $(ZnS)_{80}(SiO_2)_{20}$ (column 2, lines 58-59) having a jitter value of 10% or less (column 14, lines 41-42). Yamada and Miyamoto are analogous art because they are both directed to recording mediums. It would have been obvious to one of ordinary skill in the art for the recording medium of Yamada to experience less than 10% jitter during overwriting providing good reproducibility as taught by Miyamoto (column 14, lines 40-48).

Claim Rejections – 35 USC § 103(a)

4. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being obvious over Yamada et al. (U.S. 6,127,016) in view of Miyamoto et al (U.S. 6,132,932) further in view of Miyauchi et al (U.S. 5,878,021).

Yamada and Miyamoto are relied upon for claim 1 as above. Yamada does not disclose a second reflective layer. Miyauchi teaches an information recording medium comprising first and second protective layers and first and second reflective layers (column 9, lines 37-42) where the reflective layer is a AlTi alloy (column 5, line 59). All of the references are analogous art because they are all from the same field of recording media. It would have been obvious to one of ordinary skill in art to include two

reflective layers in the recording medium of Yamada because Miyauchi teaches these layers are necessary to provide additional protection for the recording layer by helping to reduce heat from entering and altering the intermediate components of the recording medium.

Response to Arguments

5. Applicant's arguments of rejection under 35 USC 103(a) as unpatentable over Shinozuka et al. (U.S. 5,298,305) in view of JP 09098789 further in view of Nonoyama et al (U.S. 5,646,924) are moot based on grounds of new rejection.

Applicant's arguments of rejection under 35 USC 103(a) as unpatentable over Shinozuka et al. (U.S. 5,298,305) in view of JP 09098789 in view of Nonoyama et al (U.S. 5,646,924) further in view of Miyauchi et al (U.S. 5,878,021) are moot based on grounds of new rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is 571-272-1522. The examiner can normally be reached on Monday through Friday 9:00 AM – 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Lawrence D. Ferguson
Examiner
Art Unit 1774

CYNTHIA H. KELLY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

